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We claim:

- 1. A solid oral controlled-release dosage form suitable for 24 hour dosing in a human patient comprising:
 - a pharmaceutically acceptable matrix comprising an analgesically effective amount of hydrocodone or a pharmaceutically acceptable salt thereof and controlled release material;
 - said dosage form after administration to a human patient, providing a C_{24}/C_{max} ratio of 0.55 to about 0.85; and
 - said dosage form providing a therapeutic effect for at least about 24 hours.
- 2. The dosage form of claim 1, which provides a C_{24}/C_{max} ratio of 0.55 to 0.75.
- 3. The dosage form of claim 1, wherein said matrix is a plurality of multiparticulate matrices.
- 4. The dosage form of claim 3, wherein said multiparticulates are compressed into a tablet.
- 5. The dosage form of claim 3, wherein said multiparticulates are disposed in a pharmaceutically acceptable capsule.
- 6. The dosage form of claim 1 which provides a C_{24}/C_{max} ratio of 0.60 to 0.70.
- 7. The dosage form of claim 1 which provides a dissolution release rate in-vitro of the hydrocodone when measured by the USP Basket method at 100rpm in 700 ml aqueous buffer at a pH of 1.2 at 37° C is at least 10% to about 45% by weight hydrocodone or salt thereof released at 1 hour.
- 8. The dosage form of claim 1, which provides a dissolution release rate in-vitro of the hydrocodone or salt thereof when measured by the USP Basket Method at 100 rpm in 700 ml Simulated Gastric Fluid (SGF) at 37° C for 1 hour and thereafter switching to 900 ml with Phosphate Buffer to a pH of 7.5 at 37° C, of at least 20% by weight hydrocodone or salt thereof released at 4 hrs, from about 20% to about 65% by weight hydrocodone or

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salt thereof released at 8 hrs, from about 45% to about 85% by weight hydrocodone or salt thereof released at 12 hrs, and at least 80% by weight hydrocodone or salt thereof released at 24 hours.

- 9. The dosage form of claim 1, which provides a time to maximum plasma concentration (T_{max}) of hydrocodone at about 4 to about 14 hours after oral administration of the dosage form.
- 10. The dosage form of claim 1, which provides a time to maximum plasma concentration (T_{max}) of hydrocodone at about 6 to about 12 hours after oral administration of the dosage form.
- 11. The dosage form of claim 1, which provides a C_{max} of hydrocodone which is less than 60% of the C_{max} of an equivalent dose of an immediate release hydrocodone reference formulation.
- 12. The dosage form of claim 1, wherein said administration is first administration.
- 13. The dosage form of claim 1, wherein said administration is steady state administration.
- 14. The dosage form of claim 1, wherein said ratio is provided to a population of patients.
- 15. A solid oral controlled-release dosage form suitable for 24 hour dosing in a human patient comprising an analgesically effective amount of hydrocodone or a pharmaceutically acceptable salt thereof, and controlled release material, said dosage form after oral administration, providing a rate of absorption during the time period from T_{max} to about 24 hours after oral administration of the dosage form which is from about 45% to about 85% of the rate of elimination during the same time period, said dosage form providing a therapeutic effect for at least about 24 hours.
- 16. A method of providing effective analysesia in a human patient for at least about 24 hours comprising orally administering a dosage form comprising a pharmaceutically acceptable

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matrix comprising an analgesically effective amount of hydrocodone or a pharmaceutically acceptable salt thereof and controlled release material, said dosage form after administration to a human patient, providing a C₂₄/C_{max} ratio of 0.55 to about 0.85 and a therapeutic effect for at least about 24 hours.

- 17. A process for the preparation of a solid oral controlled-release dosage form, comprising incorporating an analgesically effective amount of hydrocodone or a pharmaceutically acceptable salt thereof into a controlled release material forming a controlled release matrix formulation, said dosage form after administration to a human patient, providing a C₂₄/C_{max} ratio of 0.55 to about 0.85 and a therapeutic effect for at least about 24 hours.
- A solid oral controlled-release dosage form suitable for 24 hour dosing in a human 18. patient comprising a plurality of pharmaceutically acceptable beads comprising an analgesically effective amount of hydrocodone or a pharmaceutically acceptable salt thereof and controlled release material, said dosage form providing an in-vitro release rate, of hydrocodone or a pharmaceutically acceptable salt thereof, when measured by the USP Basket Method at 100 rpm in 900 ml aqueous buffer at a pH of between 1.6 and 7.2 at 37° C of from 0% to about 35% at 1 hour, from about 10% to about 70% at 4 hours, from about 20% to about 75% at 8 hours, from about 30% to about 80% at 12 hours, from about 40% to about 90% at 18 hours, and greater than about 60% at 24 hours; the in-vitro release rate being substantially independent of pH in that a difference, at any given time, between an amount of opioid released at one pH and an amount released at any other pH, when measured in-vitro using the USP Paddle Method of U.S. Pharmacopeia XXII (1990) at 100 rpm in 900 ml aqueous buffer, is no greater than 10%; said dosage form providing a C₂₄/C_{max} ratio of 0.55 to about 0.85; and a therapeutic effect for at least 24 hours, after oral administration to a human patient.
- 19. The dosage form of claim 18, which provides a C₂₄/C_{max} ratio of 0.55 to 0.75.
- 20. The dosage form of claim 18, which provides a time to maximum plasma concentration (T_{max}) of hydrocodone at about 4 to about 14 hours after oral administration of the dosage form.

- 21. The dosage form of claim 18, which provides a time to maximum plasma concentration (T_{max}) of hydrocodone at about 6 to about 12 hours after oral administration of the dosage form.
- 22. The dosage form of claim 18, which provides a C_{max} of hydrocodone which is less than 60% of the C_{max} of an equivalent dose of an immediate release hydrocodone reference formulation.
- 23. The dosage form of claim 18, wherein said administration is first administration.
- 24. The dosage form of claim 18, wherein said administration is steady state administration.
- 25. The dosage form of claim 18, wherein said ratio is provided to a population of patients.
- 26. A method of providing effective analgesia in a human patient for at least about 24 hours comprising orally administering a dosage form of claim 18 to a human patient.
- 27. A sustained release oral dosage form comprising:
 - (a) a bilayer core comprising:
 - (i) a drug layer comprising an analgesically effective amount of hydrocodone or a pharmaceutically acceptable salt thereof; and
 - (ii) a displacement layer comprising an osmopolymer; and
 - (b) a semipermeable wall surrounding the bilayer core having a passageway disposed therein for the release of said hdyrocodone or pharmaceutically acceptable salt thereof;

said dosage form providing a C_{24}/C_{max} ratio of 0.55 to about 0.85; and said dosage form providing a therapeutic effect for at least about 24 hours after oral administration to a human patient.

- 28. The dosage form of claim 27, which provides a C_{24}/C_{max} ratio of 0.55 to 0.75.
- 29. The dosage form of claim 27, which provides a time to maximum plasma

- concentration (T_{max}) of hydrocodone at about 4 to about 14 hours after oral administration of the dosage form.
- 30. The dosage form of claim 27, which provides a time to maximum plasma concentration (T_{max}) of hydrocodone at about 6 to about 12 hours after oral administration of the dosage form.
- 31. The dosage form of claim 27, which provides a C_{max} of hydrocodone which is less than 60% of the C_{max} of an equivalent dose of an immediate release hydrocodone reference formulation.
- 32. The dosage form of claim 27, wherein said administration is first administration.
- 33. The dosage form of claim 27, wherein said administration is steady state administration.
- 34. The dosage form of claim 27, which provides a dissolution release rate in-vitro of the hydrocodone or salt thereof when measured by the USP Basket Method at 100 rpm in 700 ml Simulated Gastric Fluid (SGF) at 37° C for 1 hour and thereafter switching to 900 ml with Phosphate Buffer to a pH of 7.5 at 37° C, of at least 20% by weight hydrocodone or salt thereof released at 4 hrs, from about 20% to about 65% by weight hydrocodone or salt thereof released at 8 hrs, from about 45% to about 85% by weight hydrocodone or salt thereof released at 12 hrs, and at least 80% by weight hydrocodone or salt thereof released at 24 hours.
- 35. The dosage form of claim 27, wherein said ratio is provided to a population of patients.
- 36. A method of providing effective analgesia in a human patient for at least about 24 hours comprising orally administering a dosage form of claim 27 to a human patient.
- 37. A sustained release oral dosage form comprising:
 - (a) a bilayer core comprising:
 - (i) a drug layer comprising an analgesically effective amount of hydrocodone or a pharmaceutically acceptable salt thereof; and
 - (ii) a displacement layer comprising an osmopolymer; and
 - (b) a semipermeable wall surrounding the bilayer core having a

passageway disposed therein for the release of said hydrocodone or pharmaceutically acceptable salt thereof;

said dosage form providing an in-vitro release rate, of hydrocodone or a pharmaceutically acceptable salt thereof, when measured by the USP Basket Method at 100 rpm in 900 ml aqueous buffer at a pH of between 1.6 and 7.2 at 37° C of from 0% to about 35% at 1 hour, from about 10% to about 70% at 4 hours, from about 20% to about 75% at 8 hours, from about 30% to about 80% at 12 hours, from about 40% to about 90% at 18 hours, and greater than about 60% at 24 hours; the in-vitro release rate being substantially independent of pH in that a difference, at any given time, between an amount of opioid released at one pH and an amount released at any other pH, when measured in-vitro using the USP Paddle Method of U.S. Pharmacopeia XXII (1990) at 100 rpm in 900 ml aqueous buffer, is no greater than 10%.

38. A method of providing effective analgesia in a human patient for at least about 24 hours comprising orally administering a dosage form of claim 37 to a human patient.